

WHAT IS CLAIMED IS:

1. A composite polymeric material having high resistance to impact energy comprising expanded beads of polypropylene dispersed in a resinous matrix selected from the group consisting of melaminic resin, phenolic resin, polyurethane resin and mixtures thereof, wherein the resin matrix substantially fills the voids among the polypropylene beads, the polypropylene beads being substantially positioned adjacent one to the others.

2. The material according to claim 1 wherein the resinous matrix is a polyurethane resin obtained by polycondensation of an isocyanate or polyisocyanate with a compound containing active hydrogen.

3. The material according to claim 2, wherein the isocyanate or polyisocyanate and the active hydrogen containing compound have a polymerization time higher than 30 seconds.

4. An impact-resistant manufactured article including a composite polymeric material having high resistance to impact energy according to claim 1.

5. The impact-resistant manufactured article according to claim 4, wherein said article is an inner protective liner of a helmet.